

is in direct contact with said gate oxide film;

forming diffusion regions in said substrate at both lateral sides of said gate electrode pattern

by introducing impurity element into said substrate through said gate oxide film while using said gate  
electrode pattern as a mask; and

introducing N atoms, after said step of introducing said impurity element, into said gate oxide  
film while using said gate electrode pattern as a mask,

wherein said step of introducing N atoms into said gate oxide film includes an ion  
implantation process of N ions conducted with a dose of  $1 - 3 \times 10^{14} \text{ cm}^{-2}$ .